Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

K-I

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

BA 5: Development & Demonstration (SDD)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	19.845	41.860	60.545	0.000	60.545	140.045	188.429	200.364	154.195	Continuing	Continuing
654236: Engineering Analysis	4.484	17.650	14.700	0.000	14.700	29.555	37.522	49.253	62.183	Continuing	Continuing
654807: Nuclear Weapons & CP Technologies	6.300	6.470	6.533	0.000	6.533	6.631	6.734	6.837	6.937	Continuing	Continuing
655708: Nuclear Weapons Support	9.061	17.740	39.312	0.000	39.312	103.859	144.173	144.274	85.075	Continuing	Continuing

A. Mission Description and Budget Item Justification

- (U) The Air Force (AF) is tasked with maintaining and providing technical expertise on all AF nuclear weapons; nuclear weapon systems; and with developing and maintaining counter-chemical, biological, radiological, nuclear, and high explosive (C-CBRNE) capabilities. This program provides resources for technical and programmatic activities which includes performing independent analyses on all AF nuclear weapons systems activities including weapons development/sustainment, interoperability, compatibility, safety/security/reliability, stockpile management/retirement; C-CBRNE assessments; and nuclear certification and nuclear certification management. The Air Force Nuclear Weapons Center, Kirtland AFB, NM, is the executing agency for this program.
- (U) Specific mission tasking includes:
- --- Support AF, Department of Defense (DoD) and Joint DoD-Department of Energy (DOE) weapons acquisition activities for the sustainment and/or development of nuclear weapons, delivery systems, logistics/handling support systems, weapon storage facilities, maintenance/trainer/test equipment, and technical orders to include nuclear certification as required.
- --- Analyze and document nuclear weapons issues related to risk assessment, data collection, model development, model validation, and weapon effectiveness in support of the DoD-DOE Annual Surety Report, DOE Stockpile Stewardship Plan, the DoD-DOE Weapon Annual Assessment, and DoD-DOE nuclear stockpile planning/requirements assessment.
- --- Identify, evaluate, and assess current and projected innovative concepts for combating WMD capabilities to include participating in the pre-acquisition process as appropriate for those projects being evaluated for possible development and/or supporting current elimination and offensive operations, active and passive defense, and consequence management related to C-CBRNE weapons and their manufacturing/bulk storage facilities.
- --- Develop, validate, and deploy mission planning software tools for targeting WMD facilities and systems.

Exhibit R-2, **RDT&E Budget Item Justification**: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

BA 5: Development & Demonstration (SDD)

- (U) This program is essential to maintaining the current and future safety, security, and reliability of weapons in the AF nuclear stockpile as well as their delivery and support systems. This program also addresses current and future AF nuclear deterrence and combating WMD requirements.
- (U) These efforts are Budget Activity 5, System Development and Demonstration, because they include system specific programs leading to approved life extension programs for and/or modifications to AF nuclear weapons, weapon systems, and support systems as well as developing new weapons or modifications to existing weapons and/or weapon systems to meet evolving combating WMD mission requirements.

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	<u>FY 2011 Total</u>
Previous President's Budget	20.011	37.860	0.000	0.000	0.000
Current President's Budget	19.845	41.860	60.545	0.000	60.545
Total Adjustments	-0.166	4.000	60.545	0.000	60.545
 Congressional General Reductions 		0.000			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		4.000			
 Congressional Directed Transfers 		0.000			
Reprogrammings	0.000	0.000			
SBIR/STTR Transfer	0.000	0.000			
 Other Adjustments 	-0.166	0.000	60.545	0.000	60.545

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 654236: Engineering Analysis

Congressional Add: Nuclear Enterprise Surety Tracking Initiative

	FY 2009	FY 2010
	0.000	4.000
Congressional Add Subtotals for Project: 654236	0.000	4.000
Congressional Add Totals for all Projects	0.000	4.000

Change Summary Explanation

FY2010 Congressional add for Nuclear Entreprise Tracking system.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604222F: Nuclear Weapons Support	
The FY 2010 President's Budget submittal did not reflect FY 2017 cannot be made in a relevant manner	through FY 2015 funding. Therefore, explanation of change	s between the two budget positions

DATE: February 2010

APPROPRIATION/BUDGET ACTI 3600: Research, Development, Tes BA 5: Development & Demonstration	st & Evaluatio	n, Air Force			IOMENCLA 2F: <i>Nuclear</i>		ıpport	PROJECT 654236: <i>En</i>	gineering Ar	nalysis	
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
654236: Engineering Analysis	4.484	17.650	14.700	0.000	14.700	29.555	37.522	49.253	62.183	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

- (U) Provide engineering analysis for all Air Force (AF) nuclear weapons, delivery systems, and support systems to include all phases of acquisition. Provide the engineering and technical management expertise required in critical areas of nuclear weapons safety, security, and reliability; operations; modernization; testing; certification; and counterproliferation.
- (U) Budget Activity Justification: These efforts are Budget Activity 5, System Development and Demonstration, because they include system specific programs to identify and develop life extension programs for, as well as, solutions to problems and/or deficiencies in AF nuclear weapons, nuclear weapon systems, and the supporting infrastructure.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Perform technical analysis in support of life extension and modernization programs for weapons in the Air Force stockpile.	1.914	1.912	1.896	0.000	1.896
FY 2009 Accomplishments: In FY 2009: Worked with national laboratories to recode legacy software so that it will operate on modern computing systems. Also, refined requirements for new codes and developed operational prototypes.					
FY 2010 Plans: In FY 2010: Continue work with national laboratories to recode legacy software so that it will operate on modern computing systems. Finalize requirements for new codes and update source term information.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 3600: Research, Development, Test & Evaluation, Air Force PE 0604222F: Nuclear Weapons Support 654236: Engineering Analysis BA 5: Development & Demonstration (SDD) B. Accomplishments/Planned Program (\$ in Millions) FY 2011 FY 2011 FY 2011 **FY 2009 FY 2010** Base OCO Total FY 2011 Base Plans: In FY 2011: Develop an in-house computation center with trained personnel capable of performing calculations using the new and updated nuclear tool set. FY 2011 OCO Plans: In FY2011 OCO: N/A MAJOR THRUST: Provide government leadership with pre-acquisition technical, engineering, and 2.570 2.439 2.371 0.000 2.371 management support/expertise for candidate weapons. FY 2009 Accomplishments: In FY 2009: Funded efforts to gain better scientific answers to CBRNE problems facing AF stake holders. FY 2010 Plans: In FY 2010: Work to identify AF stake holders and advertise Air Force Nuclear Weapons Center (AFNWC) products and continue to fund experimentation in previously identified CBRNE knowledge shortfalls. Publish user guide to understanding agent defeat. FY 2011 Base Plans: In FY 2011: Continue to work with AF stake holders and provide S&T support in order to combat all five pillars of CBRNE. Continue to fund experimentation in previously identified CBRNE knowledge shortfalls. FY 2011 OCO Plans: In FY 2011 OCO: N/A MAJOR THRUST: Joint Warhead Arming & Fuzing Assembly (AFA) Sustainment. Includes civilian payroll 0.000 8.703 9.891 0.000 9.891 for government civilian personnel in support of this program.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE
PE 0604222F: Nuclear Weapons Support
654236: Engineering Analysis

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: N/A					
FY 2010 Plans: In FY 2010: Continue feasibility and design study in conjunction with the Navy and the UK-MoD to complete engineering design/development of a modern AFA for use on ballistic missile warheads.					
FY 2011 Base Plans: In FY 2011: Continue feasibility and design study in conjunction with the Navy and UK-MoD on ballistic missile warheads.					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
MAJOR THRUST: Provide Special Access Program and Sensitive Compartmented Information (SAP/SCI) security.	0.000	0.175	0.042	0.000	0.042
FY 2009 Accomplishments: In FY 2009: N/A					
FY 2010 Plans: In FY 2010: Create a secure environment to facilitate successful development and execution of multiple programs. Coordinate security matters with all levels of the AF to include subordinate units, major commands (MAJCOMS) and Air Staff. Provide personnel security, first tier adjudication and coordination with Special Access Program Central Office in personnel matters. Provide information security to include training, safeguarding, development and implementation of security operation procedures, test plans and inspections. Provide unique hardware protection method in accordance with Executive Order (EO) 12598, NISPOM, NISPOMSUP, JAFAN, and DCID requirements.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

PATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0604222F: Nuclear Weapons Support
654236: Engineering Analysis

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Continue to provide a secure environment to facilitate successful development and execution of programs. Continue to coordinate security matters with all levels of the AF, to include subordinate units, MAJCOMS and Air Staff. Provide personnel security, first tier adjudication and coordination with Special Access Program Central Office in personnel matters. Provide information security to include training, safeguarding, development, and implementation of security operation procedures, test plans and inspections. Provide unique hardware protection method in accordance with EO 12598, NISPOM, NISPOMSUP, JAFAN, and DCID requirements.					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
MAJOR THRUST: Provide technical analysis on nuclear weapon systems design and C-CBRNE advance concepts.	0.000	0.421	0.500	0.000	0.500
FY 2009 Accomplishments: In FY 2009: Investigated GPS-Denied Technologies (hardware and software environments) for all nuclear systems. Systems can be countered that rely on GPS-aiding. Missions like Global Strike will need this for the fast lying systems that are being proposed and current non-GPS systems.					
FY 2010 Plans: In FY 2010: Research and develop unique technologies and capabilities for defeating WMDs while minimizing collateral effects and ensuring high reliability for overall mission success. Development, integration, and testing of hardware and software of advanced concepts supporting AFNWC Special Access Programs. Continue GPS-Denied navigation testing of inertial measurement techniques and communications technology for GPS-Denied environments.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

DATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0604222F: Nuclear Weapons Support
654236: Engineering Analysis

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Continue research and develop unique technologies and capabilities for defeating WMDs while minimizing collateral effects and ensuring high reliability for overall mission success. Further the development, integration, and testing of hardware and software of advanced concepts supporting AFNWC Special Access Programs. Continue GPS-Denied navigation to further explore flight applications and technology for GPS-Denied environments.					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	4.484	13.650	14.700	0.000	14.700

	FY 2009	FY 2010
	0.000	4.000
Congressional Add: Nuclear Enterprise Surety Tracking Initiative		
FY 2009 Accomplishments:		
In FY 2009: N/A		
FY 2010 Plans:		
In FY 2010: Begin development of a secure, electronic system to track the location and status		
of nuclear warheads and bombs, and critical nuclear components. Includes civilian payroll for government civilian employees associated with this program.		
Congressional Adds Subtotals	0.000	4.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

654236: Engineering Analysis

C. Other Program Funding Summary (\$ in Millions)

FY 2011 FY 2011 FY 2011 Base

0.000

Cost To

• PE Not Provided (5405):

FY 2009 FY 2010 0.000 0.000

OCO 0.000

Total FY 2012 0.000

FY 2013 0.000 0.000

FY 2014 0.000

12.000

FY 2015 Complete Total Cost

0.000 0.000

0101213F, Minuteman Squadrons, Project 5915, Joint Warhead

Modernization) Joint Warhead AFA

Line Item

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D. Acquisition Strategy

Multiple Cost Plus Award Fee (CPAF) and/or Time and Materials (T&M) contracts, and Military Interdepartmental Purchase Requests (MIPRs) are/will be used to obtain technical analyses and technical support for safety, operations and counterproliferation assessments. All contracts will be openly competed.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

654236: Engineering Analysis

Support (\$ in Millions)

				FY 2	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Life extension/ modernization programs	Various/ Various	Various Various	1.914	1.912	Mar 2010	1.896	Feb 2011	0.000		1.896	Continuing	Continuing	Continuing
		Subtotal	1.914	1.912		1.896		0.000		1.896			

Remarks

*ITT Systems, Albuquerque, NM; Los Alamos National Labs, Los Alamos, NM; SAIC, Arlington, VA; ANSER, Arlington, VA

Product Development (\$ in Millions)

-	•	•											
				FY 2	2010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Pre-acquisition technical, engineering and management support	MIPR	SNL Albuquerque NM DOE: Albuquerque, NM	2.570	2.439	Jan 2010	2.371	Jan 2011	0.000		2.371	Continuing	Continuing	Continuing
Joint Warhead AFA Sustainment	TBD/TBD	TBD TBD	8.800	8.703	Feb 2010	9.891	Feb 2011	0.000		9.891	164.800	192.194	Continuing
		Subtotal	11.370	11.142		12.262		0.000		12.262			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604222F: Nuclear Weapons Support

654236: Engineering Analysis

Test and Evaluation (\$ in Millions)

				FY 2	FY 2010		2011 se	FY 201 OCO	-	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAP/SCI Security	MIPR	SNL Albuquerque NM: DOE: Albuquerque, NM	0.000	0.175	Feb 2010	0.042		0.000		0.042	0.217	0.434	0.217
Nuclear Enterprise Surety Tracking Initiative	TBD/TBD	TBD TBD	0.000	4.000	Feb 2010	0.000		0.000		0.000	0.000	4.000	0.000
GPS-Denied Technology	MIPR	SNL Albuquerque, NM	0.000	0.421	Feb 2010	0.500	Jan 2011	0.000		0.500	0.000	0.921	0.000
		Subtotal	0.000	4.596		0.542		0.000		0.542	0.217	5.355	0.217

Remarks

	Total Prior Years Cost	FY 2010		2011 Ise	FY 2	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	13.284	17.650	14.700		0.000		14.700			

Remarks

Total Prior Years Cost may include only FY 2009 data.

DATE: February 2010

Activity	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
Activity	1 100	1 103	1110		1 1 12	1110	1 1 14	1110
Government Lead Project Officer & Project								
Officers Group Activities (Joint Dod/DOE) *			Th			Project 5708, inning in FY 2		
 Weapon Specific LPO/POG Activities (All Weapons) 	-	-		vveapons.	support, ocy	mining mir i 2	010	
Government Lead/Action Officers for C-BRNE								
Activities (Project Management/Scientific/								
Technical Activities *								
Weapon Surveillance, Sustainment,								
Modernization, & Life Extension Activities								
Weapons Specific								
 Gravity Bomb Support (B61/B83) Cruise Missile Warhead Support (W80/W84) 								
- ICBM Warheads (W62/W78/W87)	-							-
Stockpile Transition	-							-
Advanced Concepts & Studies								
 Pre-Acquisition Activities Advanced Technology Analyses/Evaluations 								
Joint AF-Navy-UK Missile Warhead Arming &								
Fuzing Assembly (AFA) Sustainment		2	Feasib Initial D			gineering Desi k Development		Prod Prod
C-CBRNE Technical Activities								
Archiving Critical Nuclear Information			eletronic stor base generat		7 F	ollow-on Effo	rts (as require	ed)
		000000000000000000000000000000000000000	genera.					
Decid Access Identification (DAID) Decides	N .	Field Demo		Follow-On 7 (as req				
Rapid Asset Identification (RAID) Project	Scenario)······	Implementa-			-		
	Development		tion					
N 1 W 55 1 AND 0 0 1 1 1 1 1		date/Modern Legacy Code						
 Nuclear Weapons Effects (NWE) & Survivability Codes Project 		*	>_	ZUserTr	aining and F	ollow-On Acti	vities (as req	uired)
ACTION CONTRACTOR CONT	btain/Consolida	ate F	inalize Codes	&				
	Legacy Codes		VV&A					
	Legacy codes							

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604222F: Nuclear Weapons Support

PROJECT

654236: Engineering Analysis

Schedule Details

	Sta	art	E	nd
Event	Quarter	Year	Quarter	Year
Project Officer Group (POG) Management/Engineering & Technical Analysis Government Personnel [FY 2009 funding for this effort moved to Project 5708, Nuclear Weapons Support, for execution. Beginn	1	2011	4	2011
Annual Warhead Assessments (B61/B83, W80/W84, & W78/W87)	3	2009	4	2011
Combating Weapons of Mass Destruction (WMD) Project Officer and Technical AnalysisGovernment Personnel [FY 2009 funding for this effort moved to Project 5708, Nuclear Weapons Support, for executi	1	2010	4	2011
Weapon/Warhead Studies & Analysis	1	2010	4	2011
Reliable Replacement Warhead (RRW) Studies & Analysis	1	2010	4	2011
Joint Warhead Fuze Sustainment (with Navy) - Feasibility & Initial Design Studies	1	2010	4	2011
Advanced ICBM Arming/Fuzing Studies (jointly with Navy & UK MoD)	1	2009	4	2011
Future Stockpile Studies	1	2009	4	2011
Nuclear Roadmap/CONOPS Development	1	2009	4	2011
Minuteman III/ICBM	2	2010	4	2011
Minuteman III Safety Enhanced Reentry Vehicle Support	1	2009	4	2011
Mk12A/Mk21 Refurbishment Program Support	1	2009	4	2011
W78/W87 Nuclear Surety Program	1	2009	4	2011
ICBM Flight Test Study	1	2010	4	2011
Gravity Weapons	1	2010	4	2011
B61 Modernization Studies	1	2009	2	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604222F: Nuclear Weapons Support

PROJECT

654236: Engineering Analysis

	St	art	En	ıd
Event	Quarter	Year	Quarter	Year
Gravity Weapon Flight Test Program Support (B61/B83)	1	2009	4	2011
Cruise Missile	2	2010	4	2011
Cruise Missile Warhead Modernization Studies	1	2009	4	2011
Cruise Missile Flight Test Program Support	3	2009	4	2011
C-CBRNE/Counterproliferation Support	2	2010	4	2011
Computer Code Development/Support	1	2009	4	2011
Advanced/Innovative Technology Evaluations	1	2009	4	2011

DATE: February 2010

EXHIBIT N-ZA, ND I &L FIOJECT 3us	uncauon. F	D ZUII AII I	OI CE						DAIL. I GD	luary 2010	
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Tes BA 5: Development & Demonstration		IOMENCLA 2F: <i>Nuclear</i>	TURE Weapons Sι	ıpport	PROJECT 654807: Nuclear Weapons & CP Techno						
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
654807: Nuclear Weapons & CP Technologies	6.300	6.470	6.533	0.000	6.533	6.631	6.734	6.837	6.937	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Fyhibit R-24 RDT&F Project Justification: PR 2011 Air Force

- (U) Perform engineering analyses across the chemical, biological, radiological, nuclear and high explosive (CBRNE) pillars for countering weapons of mass destruction (WMD) with emphasis on asymmetric threats (specifically CBRNE) and other difficult to attack targets. Develop proposed solutions for consideration for entry into acquisition. Plan for and transition selected nuclear and non-nuclear concepts into either an acquisition or advanced concept technology demonstration (ACTD) program to include identifying funding, technical, schedule, and programmatic content. Prepare the necessary acquisition-related documentation to support program and/or decision reviews.
- (U) Develop, evaluate, and utilize tools required for the employment of current inventory and new concepts for combating WMD weapons to include intelligence, surveillance, and reconnaissance; battle damage assessment; and target defeat/collateral effects predictions for current and future operations.
- (U) Budget Activity Justification: These efforts are Budget Activity 5, System Development and Demonstration, because they are system specific programs that result in identifying, and developing or modifying weapons to meet new and evolving elimination and offensive capabilities for combating WMD. Efforts also include developing and/or validating target planning software for existing/new concepts and weapons for combating WMD.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Studies and assessments that evaluate adversarial threats against potential US system vulnerabilities.	0.000	1.200	1.100	0.000	1.100
FY 2009 Accomplishments: In FY 2009: N/A					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE
PE 0604222F: Nuclear Weapons Support
654807: Nuclear Weapons & CP Technologies

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010: Develop a formal process for warfighter requirements collection, analysis, and evaluation. Provide technical and scientific analyses to AFNWC's new/advanced requirements studies. Interact with the warfighters (combatant commands, services, international partners) to collect and integrate requirements with emerging capabilities and technologies. Identify and evaluate emerging capabilities and technologies. Provide technical and scientific research in support of AFNWC/XR's evaluation, analysis, and application of technology to meet warfighter requirements. Provide subject matter expertise during AFNWC/XR's transition of technologies to acquisition agencies. Provide technical support for all AFNWC Special Access Programs (SAPs)					
FY 2011 Base Plans: In FY 2011: Refine process for warfighter requirements collection, analysis, and evaluation. Continue to provide technical and scientific analyses to AFNWC's new/advanced requirements studies. Interact with the warfighters (combatant commands, services, international partners) to collect and integrate requirements with emerging capabilities and technologies. Further investigate, identify and evaluate emerging capabilities and technologies. Continue to provide technical and scientific research in support of AFNWC/XR's evaluation, analysis, and application of technology to meet warfighter requirements. Provide subject matter expertise during AFNWC/XR's transition of technologies to acquisition agencies. Continue to provide technical support for all AFNWC Special Access Programs.					
FY 2011 OCO Plans: In FY2011 OCO: Not applicable.					
MAJOR THRUST: Perform engineering analysis across CBRNE pillars for countering weapons of mass destrucion with emphasis on asymmetric threats and other difficult to attack targets.	6.300	5.270	5.433	0.000	5.433

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE PROJECT

6.300

6.470

6.533

0.000

6.533

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

654807: Nuclear Weapons & CP Technologies

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Continued to develop and maintain the Empirical Lethality Model (ELM) and SERPENT C-CBRNE modeling codes. Continued to populate missing data needed to operate the codes and to develop methodologies for verification of historical information.					
FY 2010 Plans: In FY 2010: Continue to develop and maintain the ELM and SERPENT C-CBRNE modeling codes. Focus on completing data requirements on several categories of information present in the ELM mode.					
FY 2011 Base Plans: In FY 2011: In addition to continue work on ELM and SERPENT, activities will focus hard on incorporating user community requreqments and validation of the models in support of the new AFNWC STIC.					
FY 2011 OCO Plans: In FY2011 OCO: Not applicable.					

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	000	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• PE Not Provided (5762): Activity	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Not Provided											

Accomplishments/Planned Programs Subtotals

D. Acquisition Strategy

Multiple Cost Plus Award Fee (CPAF) and/or Time and Materials (T&M) contracts, and Military Interdepartmental Purchase Requests (MIPRs) are/will be used to obtain technical analyses and technical support for safety, operations and counterproliferation assessments. All contracts will be openly competed.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604222F: Nuclear Weapons Support	PROJECT 654807: Nuclear Weapons & CP Technologies
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for Force performance goals and most importantly, how they contribute		and how those resources are contributing to Air

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

654807: Nuclear Weapons & CP Technologies

Test and Evaluation (\$ in Millions)

I .	•	•											
				FY 2	010	FY 2 Ba	2011 ise	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Special Access Programs Analysis and Evaluation	SS/Various	Various Various	0.000	1.200	Jan 2010	1.100	Dec 2010	0.000		1.100	Continuing	Continuing	Continuing
Engineering analysis	C/CPAF	Various Various	6.300	5.270		5.433		0.000		5.433	0.000	17.003	0.000
		Subtotal	6.300	6.470		6.533		0.000		6.533			

Remarks

Operational Test & Evaluation: *ESC/MIT Lincoln Labs, Boston, MA; AFRL, Albuquerque, NM; ITT/AES, Albuquerque, NM, ASC/END, Wright-Patterson AFB, OH Development Test & Evaluation: ELM,SERPENT C-CBRNE modeling codes;

*ASC, Wright-Patterson AFB, OH; AAC, Eglin AFB, FL; DTRA, Ft Belvoir VA; White Sands Missile Range, Alamagordo, NM

	Total Prior Years Cost	FY 2010		2011 ise	FY :	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.300	6.470	6.533		0.000		6.533			

Remarks

Total Prior Years Cost may include only FY 2009 data.

DATE: February 2010

PROJECT APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE** PE 0604222F: Nuclear Weapons Support 3600: Research, Development, Test & Evaluation, Air Force 654807: Nuclear Weapons & CP Technologies BA 5: Development & Demonstration (SDD) Activity FY08 FY09 **FY10 FY11** FY12 FY13 FY14 FY15 Advanced Concepts Studies & Evaluations Prototype Design & Void Sensing Fuze Development Evaluation Prototype Fuze V Development Prototype Development Platform Communication Flight Design Engineering & Integration Studies & Flight Tests Tightrope Anti-Biological/Chemical (ABC) Weapon Prototype Design Increment I Prototype T&E △ Design Studies Prototype Dev Prototype T&E Increment II Advanced Concepts & Studies Test Execution Chemical Biological Agent Defeat (CBAD) Baseline Weapon Testing Target Analysis Development Nuclear Agent Defeat Concept Evaluations 1st Series of Shock 2nd Series of Shock Testing in Support of Modeling Tube Tests Follow-on Test Series Modeling Efforts Module Development Complete Module Development: Conduct VV&A Modeling and Simulations Software Enhancements/Upgrades and User/Warfighter Support SERPENT Release Release Release Release Release Release Release Ver 2.2 Ver 3.0 Ver 3.1 Ver 3.2 Ver 4.0 Ver 4.1 Ver 4.2 Update Update Update Thermo-Thermal Chemical UV Rad Ehanced Lethality Model (ELM) Database Database Release Release Release Release Release Release Ver 5.2 Update Update Update Update Update

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE PROJECT 3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

PE 0604222F: Nuclear Weapons Support

654807: Nuclear Weapons & CP Technologies

Schedule Details

	Sta	art	End		
Event	Quarter	Year	Quarter	Year	
Advanced Modeling & Simulation in Support of CBRNE Consequence Management	1	2009	4	2011	
Effects Modeling Tools	2	2010	4	2011	
Joint VV&A	1	2009	4	2011	
Joint Accredited Version Release	1	2009	4	2011	
Issues Updates	1	2009	4	2011	
Chemical Biological (CB) Agent Neutralization Calculator - Issue Updates	2	2009	3	2011	
Nuclear Weapons Effects/Vulnerability Prediction Tools Against Chemical/Biological Targets - Continue Development	1	2009	4	2011	
Enhanced Cruise Missile (ECM)	2	2010	4	2011	
Develop Nuclear Weapons Requirements Documents	1	2009	4	2011	
Accomplish Phase 6.2 Study	1	2009	3	2010	
Phase 2 Study	1	2009	2	2011	
Agent Defeat Weapon (ADW)	1	2010	4	2011	
Develop Requirements and Acquisition Documentation	1	2010	4	2011	
Develop Baseline Legacy Weapon Test Database	1	2009	4	2011	
Land Based Strategic Deterrent	1	2011	4	2011	
Follow On Development Efforts	1	2009	4	2011	
ICBM Future Warhead Concepts Study	1	2009	4	2011	
Nuclear Weapons Effects/Special Nuclear Study and Analyses	1	2009	4	2011	

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604222F: Nuclear Weapons Support

PROJECT

654807: Nuclear Weapons & CP Technologies

	St	art	Eı	nd
Event	Quarter	Year	Quarter	Year
Advanced Weapon Concepts Studies and Analyses	1	2010	4	2011
Chemical/Biological Testing and Characterization	1	2009	4	2011
Advanced Weapon Guidance, Navigation, & Control for Special Weapon Applications	1	2009	4	2011
Fuze Development & Support for Agent Defeat Weapon Applications	1	2009	4	2011

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE
PE 0604222F: Nuclear Weapons Support
655708: Nuclear Weapons Support

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
655708: Nuclear Weapons Support	9.061	17.740	39.312	0.000	39.312	103.859	144.173	144.274	85.075	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY 2009, funding appropriated for government civilian pay in Project 4236, Engineering Analysis, this Program, was transferred to this Project for execution.

A. Mission Description and Budget Item Justification

- (U) Provide direct technical and engineering support for all Air Force (AF) nuclear weapon systems, support systems, facilities, and special procedures. Perform studies and analysis for nuclear capable aircraft and missile systems to include ground and maintenance support equipment required to meet certification, safety, security, reliability, operational, and other requirements; oversee and manage the AF nuclear certification process; interface with the Department of Defense (DoD), Department of Energy (DOE) to include their national laboratories, the Air Staff, operational commands, and AF nuclear weapon system related System Program Offices (SPOs) to accomplish weapon sustainment/life extension programs.
- (U) Budget Activity Justification: These efforts are Budget Activity 5, System Development and Demonstration, because they are system specific programs to identify and develop life extension programs for, as well as, solutions to problems and/or deficiencies in AF nuclear weapons, weapon systems and the supporting infrastructure.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Accomplish nuclear weapon safety, reliability, mission analysis, compatibility studies; support AF nuclear weapon stockpile activities.	1.644	2.587	4.224	0.000	4.224

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE
PE 0604222F: Nuclear Weapons Support
655708: Nuclear Weapons Support

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Accomplish a great number of no-fault independent studies and engineering surety actions, to include safety, reliability, mission analysis and compatibility studies, with great benefit to the AF nuclear weapons community.					
FY 2010 Plans: In FY 2010: Undergo a large number of no-fault independent studies and engineering surety actions with great benefit to the AF nuclear weapons community, many of which are short notice.					
FY 2011 Base Plans: In FY 2011: Continue to perform the engineering and surety analysis role by continuing studies and analysis.					
FY 2011 OCO Plans: In FY2011 OCO: N/A					
MAJOR THRUST: Conduct safety assessments of warhead maintenance operations in AF facilities. FY 2009 Accomplishments: In FY 2009: Conduct safety assessments of warhead maintenance operations in AF facilities; conduct fault analysis of nuclear weapons and weapon systems; evaluate safety implications of mods of AF storage and maintenance facilities. Started a systematic program to base-line AF maintenance and storage facilities and recommend improvements.	1.646	2.652	3.202	0.000	3.202
FY 2010 Plans: In FY 2010: Actively making safety improvements to AF facilities while studying additional areas of concern.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 3600: Research, Development, Test & Evaluation, Air Force PE 0604222F: Nuclear Weapons Support 655708: Nuclear Weapons Support BA 5: Development & Demonstration (SDD) B. Accomplishments/Planned Program (\$ in Millions) FY 2011 FY 2011 FY 2011 **FY 2009 FY 2010** Base OCO Total FY 2011 Base Plans: In FY 2011: Continue to study issues affecting AFMC and AF nuclear weapons facilities and implement improvements as resources allow. FY 2011 OCO Plans: IN FY2011 OCO: N/A 4.509 MAJOR THRUST: Prepare nuclear surety design criteria, standards, specs, and related requirements 3.759 3.650 4.509 0.000 documents for all AF ground-launched missile systems. FY 2009 Accomplishments: In FY 2009: Program engineers acted as Nuclear Project Officer Group (N-POG) leads for delivery systems, implemented the AF AMAC aircraft surveillance program, and performed independent surety engineering studies on hardware and software upgrades to delivery systems. Provided oversight for the Nuclear Certification Process for more than 40 systems/items requiring nuclear certification. Provided technical guidance to system/item developers in preparing Nuclear Certification Impact Statements. Provided for management and professional services in support of programs. FY 2010 Plans: In FY 2010: Program engineers will act as N-POG leads for delivery systems, implement the AF AMAC aircraft surveillance program, and perform independent surety engineering studies on hardware and software upgrades to delivery systems. Continue oversight of new/active Nuclear Certification activities. Anticipated workload will increase from previous year due to the extension of nuclear certification process to cover nuclear weapons storage and maintenance and handling facilities. Provide management and professional services in support of programs. FY 2011 Base Plans: In FY 2011: Program engineers will continue to act as N-POG leads for delivery systems, implement the AF AMAC aircraft surveillance program, and perform independent surety engineering studies on

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

B. Accomplishments/Planned Program (\$ in Millions)

FY 2011 FY 2011 FY 2011

FY 2009

0.294

FY 2010

0.809

Base

1.138

OCO

0.000

Total

1.138

hardware and software upgrades to delivery systems. Continue oversight of Nuclear Certification activities (continuously on-going as new systems/items are introduced or existing systems/items are modified). Continue to provide management and professional services in support of programs as required.

FY 2011 OCO Plans: In FY2011 OCO: N/A

MAJOR THRUST: Develop, maintain, and provide nuclear cert process training/education to AF.

FY 2009 Accomplishments:

In FY 2009: Conducted Nuclear Certification Process training classes for over 900 personnel from across the AF. Classes included in-residence, Mobile Training Team (MTT) and computer based training. Conducted eight in-residence Air Force Nuclear Management Fundamentals Course classes, reaching 189 personnel from across the AF in support of the AF nuclear enterprise re-invigoration effort. Conducted five MTT AFMC Nuclear Management Executive Seminars reaching over 100 AFMC senior leaders at higher headquarters and Air Logistics Centers. Initiated efforts (Nuclear Enterprise Education Needs Analysis Study) to identify/develop additional courses needed to support the development of nuclear weapons management expertise throughout the Air Force. Includes civilian payroll for government civilian personnel in support of this program.

FY 2010 Plans:

In FY 2010: Continue conducting Nuclear Certification Process and Air Force Nuclear Management Fundamentals and HQs AFMC Nuclear Management Executive Seminar courses in both in-residence and MTT formats. Develop/deliver the Nuclear Certified Equipment Users Course for field personnel involved with the use and management of Nuclear Certified Equipment (NCE) and Nuclear Weapons Related Material (NWRM). Complete the Nuclear Enterprise Education Needs Analysis Study to determine follow-on courses to the Air Force Nuclear Management Fundamentals course. Develop AFNWC education and training program to support AFNWC personnel technical and professional

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 3600: Research, Development, Test & Evaluation, Air Force PE 0604222F: Nuclear Weapons Support 655708: Nuclear Weapons Support BA 5: Development & Demonstration (SDD) B. Accomplishments/Planned Program (\$ in Millions) FY 2011 FY 2011 FY 2011 **FY 2009 FY 2010** Base OCO Total needs. Develop 498 Nuclear systems Wing (498 NSW) Munitions Maintenance Squadron training program/processes. FY 2011 Base Plans: In FY 2011: Continue conducting Nuclear Certification Process, Air Force Nuclear Management Fundamentals, HQs AFMC Nuclear Managment Executive Seminar, and NCE Users courses in both in-residence and MTT formats. Implement/execute AFNWC and 498 NSW education and training programs. FY 2011 OCO Plans: In FY2011 OCO: N/A MAJOR THRUST: Perform B-61 Life Extension Program Options Studies. 0.000 6.382 25.000 0.000 25.000 FY 2009 Accomplishments: In FY2009: N/A FY 2010 Plans: In FY 2010: Perform B-61 Life Extension Program Options Studies. Phase 2 Feasibility Study activities for options relative to the B61 Nuclear Bomb. The Phase 2A Design cost & Option Downselect Study activities. Joint DoD/DoE Phase 2/2A studies, analyses, and evaluation activities. FY 2011 Base Plans: In FY 2011: Continued Joint DoD/DoE Phase 2/2A studies, analyses, and evaluation activities. FY 2011 OCO Plans: In FY2011 OCO: N/A MAJOR THRUST: Perform Nuclear Weapons Program Support. Provide government leadership to and 1.718 1.510 1.064 0.000 1.064

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management of the AF-led POGs for the nuclear weapons in the AF active and inactive stockpile.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 655708: Nuclear Weapons Support 3600: Research, Development, Test & Evaluation, Air Force PE 0604222F: Nuclear Weapons Support BA 5: Development & Demonstration (SDD) B. Accomplishments/Planned Program (\$ in Millions) FY 2011 FY 2011 FY 2011 **FY 2009 FY 2010** Base OCO Total FY 2009 Accomplishments: In FY 2009: Joint DoD/DoE stockpile studies, analyses, and evaluation activities. Engineering Analysis support provided to the Lead Project Officers for the W62, 78, 87, 80, 84, and the B61, 83 nuclear warheads/weapons sustainment programs. FY 2010 Plans: In FY 2010: Perform joint DoD/DoE stockpile studies, analyses, and evaluation activities. Provide Engineering Analysis support to the Lead Project Officers for the W62, 78, 87, 80, 84, and the B61, 83 nuclear warheads/weapons sustainment programs. The Joint DoD/DoE W78/88 study activities will be supported from this project. FY 2011 Base Plans: In FY 2011: Continue Joint DoD/DoE stockpile studies, analyses, and evaluation activities. Continue to provide Engineering Analysis support to the Lead Project Officers for the W62, 78, 87, 80, 84, and the B61, 83 nuclear warheads/weapons sustainment programs. The continued Joint DOD/DOE W78/88 study activities will also be supported from this project. FY 2011 OCO Plans: In FY2011 OCO: N/A MAJOR THRUST: Identify orders of battle and provide mapping and data on sites of interest for Counter-0.000 0.175 0.175 0.150 0.000 Chemical, Biological, Radiological, Nuclear, Explosive (C-CBRNE) requirements. FY 2009 Accomplishments:

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In FY 2010: Initiate contractor support for C-CBRNE intelligence to provide mapping and data for

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In FY 2009: N/A

directed sites of interest.

FY 2010 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

655708: Nuclear Weapons Support

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Continue contractor support of C-CBRNE intelligence; specifically, to identify orders of battle and provide mapping and data on sites of interest.					
FY 2011 OCO Plans: In FY2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	9.061	17.740	39.312	0.000	39.312

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	<u>FY 2011</u>	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• PE 0708070F: Nuclear College	0.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
funded in AFCANS I											

D. Acquisition Strategy

RDT&E projects performed by AF organizations are direct funded, other DoD and government agencies by Military Interdepartmental Purchase Request (MIPR) or other appropriate means. Contractor efforts are accomplished via cost plus award fee (CPAF) contacts awarded as a result of open competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604222F: Nuclear Weapons Support

655708: Nuclear Weapons Support

Product Development (\$ in Millions)

				FY 2	2010	FY 2 Ba	2011 se	FY 20 OCC		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In-house Studies/ Analysis & Other Government Activities (Government Civilian Personnel)	TBD/TBD	AF Nuclear Weapons Center (AFNWC) Kirtland AFB, NM	32.581	7.492	Oct 2009	8.208	Oct 2010	0.000		8.208	Continuing	Continuing	Continuing
Studies, Analyses, & Evaluations	Various/ Various	Various Various	5.840	2.503	Feb 2010	4.728	Jan 2011	0.000		4.728	Continuing	Continuing	Continuing
B61 Life Extension Program (LEP) Options Project	TBD/TBD	TBD TBD	0.000	5.000	Feb 2010	20.000	Jan 2011	0.000		20.000	Continuing	Continuing	Continuing
Engineering & Technical Services	C/CPAF	Sverdrup Albuquerque, NM	8.367	1.787	Jan 2010	5.105	Jan 2011	0.000		5.105	Continuing	Continuing	Continuing
		Subtotal	46.788	16.782	·	38.041		0.000		38.041			

Remarks

^{* -} Typically government agencies such as Defense Threat Reduction Agency (DTRA), Ft Belvoir, VA; DOE national laboratories such as Sandia National Laboratories (SNL), Kirtland AFB, NM & Livermore, CA, & Lawrence Livermore National Laboratory (LLNL), Livermore, CA; others as needed

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604222F: Nuclear Weapons Support

655708: Nuclear Weapons Support

Support (\$ in Millions)

				FY 2010		FY 2 Ba	2011 se	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management & Professional Support Services	C/CPAF	MacAulay Brown Albuquerque, NM	3.155	0.434	Jan 2010	0.474	Jan 2011	0.000		0.474	Continuing	Continuing	Continuing
		Subtotal	3.155	0.434		0.474		0.000		0.474			

Remarks

Management Services (\$ in Millions)

				FY 2010		FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In-House Programmatic/ Financial Management (Government Civilian Personnel)	TBD/TBD	AFNWC Kirtland AFB, NM	4.640	0.524	Oct 2010	0.797	Oct 2011	0.000		0.797	Continuing	Continuing	Continuing
TAMS	TBD/TBD	No text provided No text provided	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
		Subtotal	4.640	0.524		0.797		0.000		0.797			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604222F: Nuclear Weapons Support

PROJECT

655708: Nuclear Weapons Support

	Total Prior Years Cost	FY 2010		2011 ise	FY 2	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	54.583	17.740	39.312		0.000	39.312			

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

Activity

Activity

EXACTIVITY

PROJECT
655708: Nuclear Weapons Support

Activity

EXACTIVITY

Activity

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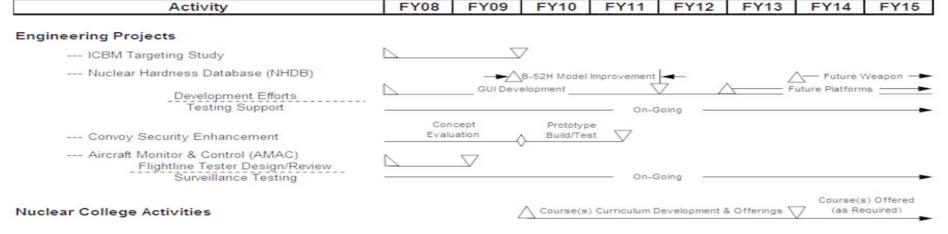
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EXACTIVE

EXACTIVE

EXACTIVITY

EXACTIVE



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DATE: February 2010

OPRIATION/BUDGET ACTIVITY Research, Development, Test & Evaluation, Air Force Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604222F: Nuclear Weapons Support					PROJECT 655708: Nuclear Weapons Support			
Activity	FY08	FY09	FY10	FY11 I	FY12	FY13	FY14 FY15		
Governmant Lead Project Officer & Project Officers Group Activities (Joint DoD/DOE)	Budgeted in			,	,		, ,		
Nuclear Weapons Program Support Pre-Acquisition Studies (Phases 1/2/2A or 6.1/6.2/6.2A) Nuclear Weapon Sustainment (Phases 3/4/5/6 or 6.3/6.4/6.5/6.6) Nuclear Weapon Retirement (Phase 7) Joint AF-NNSA Weapon Test Activities (All Weapons)				As Requir			_		
B61 Life Extension Program (LEP) Options Studies & Analysis		_	\	$\overline{}$					
Nuclear Weapons Certification Analyses Nuclear Certification Management Meetings Independent Surety Analysis Compatibility Analysis Surveillance Tests				As Requir	red				
Other Studies and Analyses Weapons Maintenance Program Safety Facilities Utilization/Design Studies Long-term Storage Operational Safety Review ICBM Operational Safety Review System II Interface Development & Integration		\Box	Z	On-Going	-	ired - — — -			

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604222F: Nuclear Weapons Support

PROJECT

655708: Nuclear Weapons Support

Schedule Details

	Sta	End		
Event	Quarter	Year	Quarter	Year
Weapon System Project Officers Group (POG) Activities	1	2009	4	2011
Nuclear Certification Management Meetings	2	2009	4	2011
Independent Surety Analysis	1	2009	4	2011
Compatibility Analysis	1	2009	4	2011
Surveillance Tests	1	2009	4	2011
Aircraft Monitor & Control (AMAC) Tests	2	2009	2	2011
Land Based Strategic Nuclear Deterrence Analysis	1	2009	4	2011
Intercontinental Ballistic Missile (ICBM) Security Mod Program	1	2009	4	2011
ICBM Crypto Upgrade Program	1	2010	4	2011
Joint Strike Fighter (JSF) Integration Certification	1	2009	4	2011
JSF Weapons Support Equipment Certification	1	2009	4	2011
Data Base Development & Management	1	2009	4	2011
Tech Order (TO) Development & Management	1	2009	4	2011
JSF TO Development	1	2009	4	2011
ICBM Operational Safety Review	1	2010	4	2011
Long Term Storage Operational Safety Review	1	2009	2	2011
Weapons Maintenance Program Safety	1	2009	4	2011
Facilities Utilization/Design Studies	1	2009	4	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604222F: Nuclear Weapons Support

655708: Nuclear Weapons Support

	St	art	End	
Event	Quarter	Year	Quarter	Year
Pre Acquisition Concept Studies (Phase 6.1/6.2/6.2A)	1	2009	4	2011
Nuclear Weapon Sustainment Activities (Phase 6/6.6)	1	2009	4	2011
Nuclear Weapon Retirement Activities (Phase 7)	2	2009	4	2011
System II Interface Development and Integration (in conjunction with the DOE national laboratories)	1	2009	4	2011
B61 LEP Option Studies	1	2010	4	2011
Information Technology Activities	1	2009	4	2011
Nuclear College Activities	1	2010	4	2011